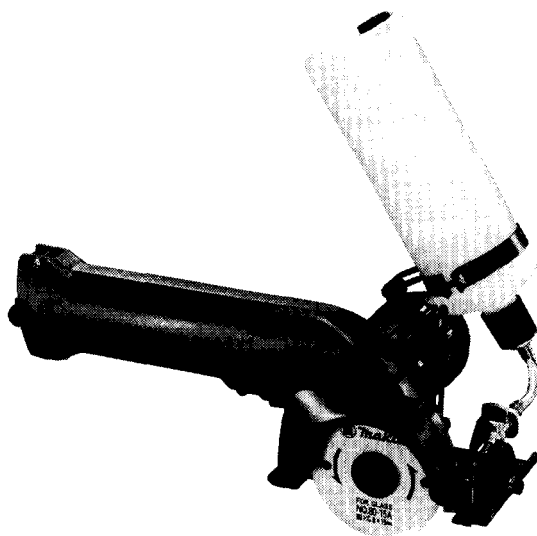


Makita

Cordless Cutter

85 mm (3-3/8") **MODEL 4190D**
85 mm (3-3/8") **MODEL 4190DW**
With Fast Charger

INSTRUCTION MANUAL



SPECIFICATIONS

• Model 4190D

Wheel diameter	Cutting depth		No load speed (RPM)	Overall length	Net weight
	90°	45°			
85 mm (3-3/8")	0 — 21 mm (0 — 53/64")	1 — 17 mm (3/64" — 43/64")	1,000	313 mm (12-3/8")	1.9 kg (4.2 lbs)

• Battery Cartridge 9000

• Model DC9700A Fast Charger

Voltage	Input	Output	Charging time
9.6 V	A.C. only 50 Hz — 60 Hz	D.C. 7.2 V — 9.6 V	1 Hr.

- * Manufacturer reserves the right to change specifications without notice.
- * Note: Specifications may differ from country to country.

IMPORTANT SAFETY INSTRUCTIONS

(For All Tools)

WARNING: WHEN USING ELECTRIC TOOLS, BASIC SAFETY PRECAUTIONS SHOULD ALWAYS BE FOLLOWED TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, AND PERSONAL INJURY, INCLUDING THE FOLLOWING:

READ ALL INSTRUCTIONS.

1. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite injuries.
2. **CONSIDER WORK AREA ENVIRONMENT.** Keep work area well lit. Don't expose power tools to rain. Don't use tool in presence of flammable liquids or gases.
3. **KEEP CHILDREN AWAY.** All visitors should be kept away from work area. Don't let visitors contact tool or extension cord.
4. **STORE IDLE TOOLS.** When not in use, tools should be stored in dry, and high or locked-up place — out of reach of children.
5. **DON'T FORCE TOOL.** It will do the job better and safer at the rate for which it was intended.
6. **USE RIGHT TOOL.** Don't force small tool or attachment to do the job of a heavy-duty tool. Don't use tool for purpose not intended.
7. **DRESS PROPERLY.** Don't wear loose clothing or jewelry. They can be caught in moving parts. Rubber gloves and non-skid footwear are recommended when working outdoors. Wear protective hair covering to contain long hair.
8. **USE SAFETY GLASSES.** Also use face or dust mask if cutting operation is dusty.
9. **DON'T ABUSE CORD.** Never carry tool by cord or yank it to disconnect from receptacle. Keep cord from heat, oil, and sharp edges.
10. **SECURE WORK.** Use clamps or a vise to hold work. It's safer than using your hand and it frees both hands to operate tool.
11. **DON'T OVERREACH.** Keep proper footing and balance at all times.
12. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for better and safer performance. Follow instructions for lubricating and changing accessories. Inspect tool cords periodically and if damaged, have repaired by authorized service facility. Inspect extension cords periodically and replace if damaged. Keep handles dry, clean, and free from oil and grease.

13. **DISCONNECT TOOLS.** When not in use, before servicing, and when changing accessories, such as blades, bits, cutters.
14. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
15. **AVOID UNINTENTIONAL STARTING.** Don't carry plugged-in tool with finger on switch. Be sure switch is OFF when plugging in.
16. **OUTDOOR USE EXTENSION CORDS.** When tool is used outdoors, use only extension cords intended for use outdoors and so marked.
17. **STAY ALERT.** Watch what you are doing, use common sense. Don't operate tool when you are tired.
18. **CHECK DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in this instruction manual. Have defective switches replaced by authorized service center. Don't use tool if switch does not turn it on and off.
19. **GUARD AGAINST ELECTRIC SHOCK.** Prevent body contact with grounded surfaces. For example; pipes, radiators, ranges, refrigerator enclosures.
20. **REPLACEMENT PARTS.** When servicing, use only identical replacement parts.

VOLTAGE WARNING: Before connecting the tool to a power source (receptacle, outlet, etc.) be sure the voltage supplied is the same as that specified on the nameplate of the tool. A power source with voltage greater than that specified for the tool can result in **SERIOUS INJURY** to the user — as well as damage to the tool. If in doubt, **DO NOT PLUG IN THE TOOL.** Using a power source with voltage less than the nameplate rating is harmful to the motor.

IMPORTANT SAFETY INSTRUCTIONS

1. **SAVE THESE INSTRUCTIONS** — This manual contains important safety and operating instructions for battery charger.
2. Before using battery charger, read all instructions and cautionary markings on (1) battery charger, (2) battery, and (3) product using battery.
3. **CAUTION** — To reduce risk of injury, charge only MAKITA Battery 7000, 9000 or 9100. Other types of batteries may burst causing personal injury and damage.
4. Do not expose charger to rain or snow.
5. Use of an attachment not recommended or sold by the battery charger manufacturer may result in a risk of fire, electric shock, or injury to persons.
6. To reduce risk of damage to electric plug and cord, pull by plug rather than cord when disconnecting charger.
7. Make sure cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
8. An extension cord should not be used unless absolutely necessary. Use of improper extension cord could result in a risk of fire and electric shock. If extension cord must be used, make sure:
 - a. That pins on plug of extension cord are the same number, size, and shape as those of plug on charger;
 - b. That extension cord is properly wired and in good electrical condition; and
 - c. That wire size is at least as large as the one specified in the table below.

TABLE 1
RECOMMENDED MINIMUM AWG SIZE FOR
EXTENSION CORDS FOR BATTERY CHARGERS

Length of Cord (Feet)	25	50	100	150
AWG Size of Cord	18	18	18	16

9. Do not operate charger with damaged cord or plug — replace them immediately.
10. Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way; take it to a qualified serviceman.
11. Do not disassemble charger or battery cartridge; take it to a qualified serviceman when service or repair is required. Incorrect reassembly may result in a risk of electric shock or fire.
12. To reduce risk of electric shock, unplug charger from outlet before attempting any maintenance or cleaning. Turning off controls will not reduce this risk.

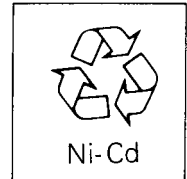
ADDITIONAL SAFETY RULES FOR CHARGER & BATTERY CARTRIDGE

1. Do not charge Battery Cartridge when temperature is BELOW 10°C (50°F) or ABOVE 40°C (104°F).
 2. Do not attempt to use a step-up transformer, an engine generator or DC power receptacle.
 3. Do not allow anything to cover or clog the charger vents.
 4. Always cover the battery terminals with the battery cover when the battery cartridge is not used.
 5. Do not short the battery cartridge:
 - (1) Do not touch the terminals with any conductive material.
 - (2) Avoid storing battery cartridge in a container with other metal objects such as nails, coins, etc.
 - (3) Do not expose battery cartridge to water or rain.

A battery short can cause a large current flow, overheating, possible burns and even a breakdown.
 6. Do not store the tool and Battery Cartridge in locations where the temperature may reach or exceed 50°C (122°F).
 7. Do not incinerate the Battery Cartridge even if it is severely damaged or is completely worn out. The battery cartridge can explode in a fire.
-

Recycling the battery

The only way to dispose of a Makita battery is to recycle it.
The law prohibits any other method of disposal.

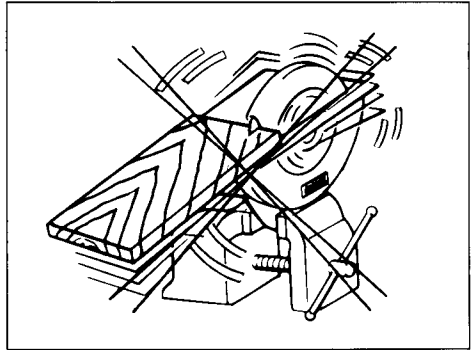


To recycle the battery:

1. Remove the battery from the tool.
 2. (a) Take the battery to your nearest Makita Factory Service Center.
or
(b) Take the battery to your nearest Makita Authorized Service Center or Distributor that has been designated as a Makita battery recycling location.
Call your nearest Makita Service Center or Distributor to determine the location that provides Makita battery recycling. See your local yellow pages under "Tools – Electric."
-

ADDITIONAL SAFETY RULES

1. Be aware that this is always in an operating condition, because it does not have to be plugged into an electrical outlet.
2. Check the wheel carefully for cracks or damage before operation. Replace cracked or damaged wheel immediately.
3. Use only flanges specified for this tool.
4. Be careful not to damage the spindle, flanges (especially the installing surface) or bolt. Damage to these parts could result in wheel breakage.
5. Hold the tool firmly.
6. Keep hands away from rotating parts.
7. Make sure the wheel is not contacting the workpiece before the switch is turned on.
8. Wait until the wheel attains full speed before cutting.
9. Stop operation immediately if you notice anything abnormal.
10. Do not attempt to lock the trigger in the "ON" position.
11. Never attempt to cut with the tool held upside down in a vise. This can lead to serious accidents, because it is extremely dangerous.

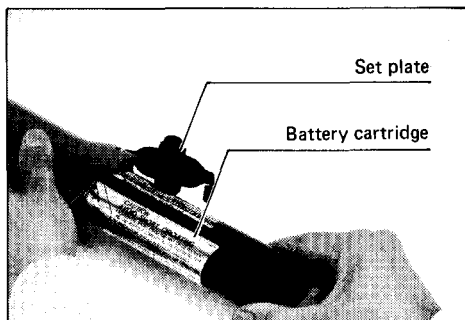


12. Before setting the tool down after completing a cut, be sure that the wheel has come to a complete stop.

SAVE THESE INSTRUCTIONS.

Installing or removing battery cartridge

- Always switch off the tool before insertion or removal of the battery cartridge.
- To remove the battery cartridge, pull out the set plate on the tool and grasp both sides of the cartridge while withdrawing it from the barrel.
- To insert the battery cartridge, align the tongue on the battery cartridge with the groove in the housing and slip it into place. Snap the set plate back into place. Be sure to close the set plate fully before using the tool.



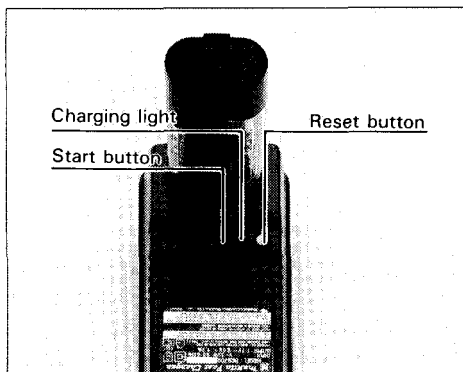
- Do not use force when inserting the battery cartridge.
If the cartridge does not slide in easily, it is not being inserted correctly.

Charging

Plug the fast charger into your power source. Insert the battery cartridge so that the plus and minus terminals on the battery cartridge are on the same sides as their respective markings on the fast charger. Insert the cartridge fully into the port so that it rests on the charger port floor.

Press the start button (red). The charging light will come on and charging will begin. If the charging light does not come on, press the reset button (yellow) first, then the start button (red). If the charging light goes out within 10 seconds even after pressing the reset button and start button a couple of times, the battery cartridge is dead. (CAUTION: Wait for more than 5 seconds after the charging light goes out to press the reset button again.) Replace it with a new one. When the charging light goes out after about one hour, you may remove the fully charged battery cartridge.

After charging, unplug the charger from the power source.



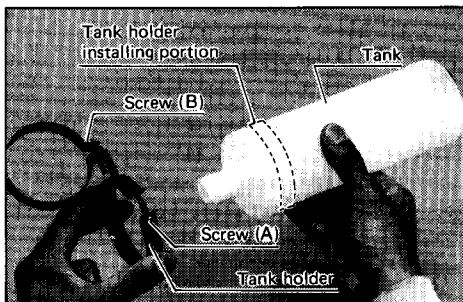
CAUTION:

- Your new battery cartridge is not charged. You will need to charge it before use.
- Do not keep the button pressed in with tape, etc. or the circuit will not function properly. Also, a malfunction of the charger may result possibly causing overheating, etc.
- If you try to charge a cartridge from a just-operated tool, sometimes the charging light will not come on. If this occurs, let the cartridge cool off for a while. Then re-insert it and try to charge it once more.

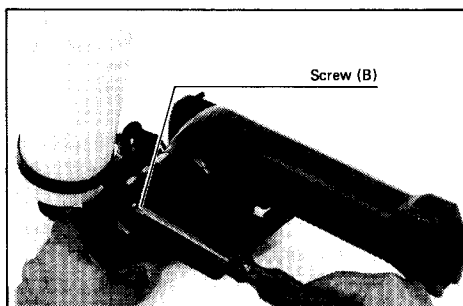
- If you wish to charge two battery cartridges, allow 15 minutes between chargings on the fast charger.

Installing water supply

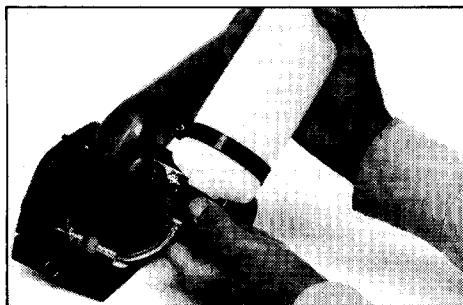
Attach the tank holder on the tank. The tank holder should be attached around the portion shown with the dotted line. Tighten the screw (A) to the extent that the tank can still turn within the tank holder.



Attach the tank holder onto the motor housing. Tighten the screw (B) securely.



Connect the cap on the end of the polyvinyl tube to the mouth of the tank. Turn the tank clockwise when making the connection. Then tighten the screw (A) securely to secure the tank.



CAUTION:

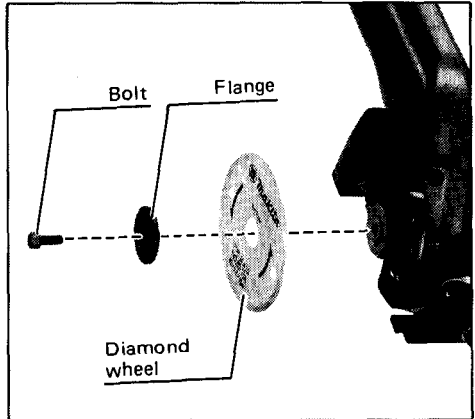
If you find the polyvinyl tube is bent like a "V" or has been strained excessively after installing the water supply, loosen the screw (B) and adjust the position of the tank to alleviate the bent, pinched or strained condition.

Installing or removing diamond wheel

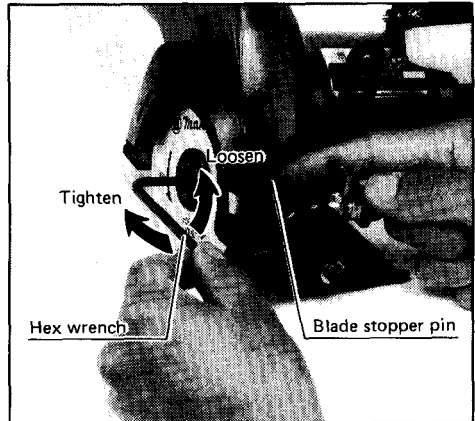
CAUTION:

Always be sure that the tool is switched off and the battery cartridge is removed before installing or removing the wheel.

To install the wheel, first loosen the bolt with the hex wrench and remove the bolt and the flange. Then mount the wheel, the flange and the bolt. The wheel should be mounted with the Makita name on the flange side.



Press the blade stopper pin and insert it through the hole in the wheel so that the wheel cannot revolve. Use the hex wrench to tighten the bolt securely.



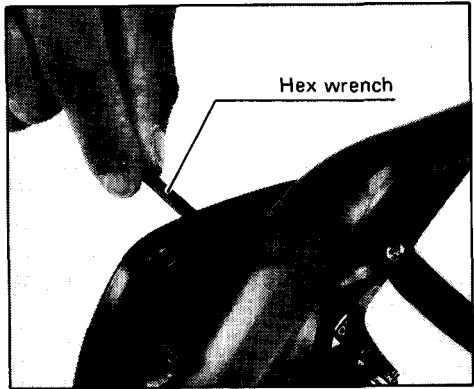
To remove the wheel, follow the installation procedure in reverse.

CAUTION:

- When installing the wheel, be sure to tighten the bolt securely.
- Use only the Makita hex wrench to install or remove the wheel.

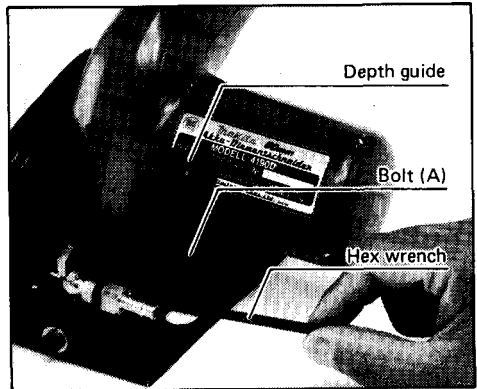
Hex wrench storage

When not in use, the hex wrench can be conveniently stored.



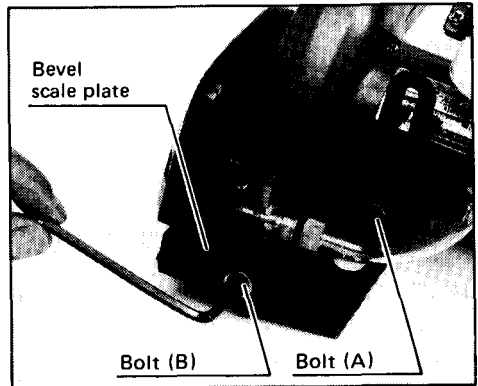
Adjusting depth of cut

Loosen the bolt (A) on the depth guide with the hex wrench and move the base up or down. At the desired depth of cut, secure the base by tightening the bolt (A).



Bevel cutting

Loosen the bolt (A) on the depth guide and the bolt (B) on the bevel scale plate with the hex wrench. Set for the desired angle (0–45°) by tilting accordingly, then tighten the bolts (A) and (B) securely.

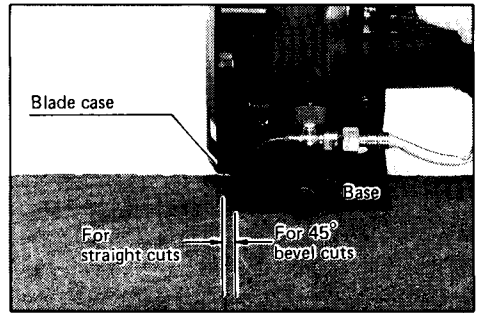


CAUTION:

After adjusting depth of cut and bevel cutting angle, be sure to tighten the bolts (A) and (B) securely.

Sighting

For straight cuts, align the edge of the base with your cutting line on the workpiece. For 45° bevel cuts, align the notch in the front of the base with it.



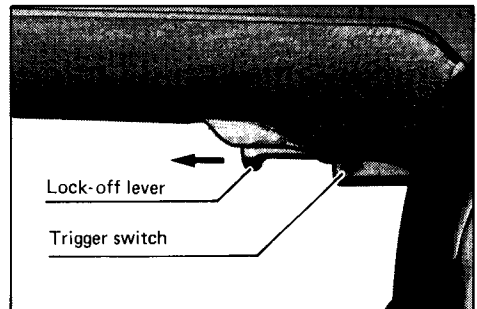
CAUTION :

When making bevel cuts, view the cutting line on the workpiece through the window in the blade case in order to cut more accurately. If you have difficulty seeing it because of the water tank, adjust the position of the tank by tilting it backward slightly.

Switch action

To prevent the trigger from being accidentally pulled, a lock-off lever is provided as a safety feature.

To start the tool, slide the lock-off lever in the direction of the arrow and pull the trigger. Release the trigger to stop.

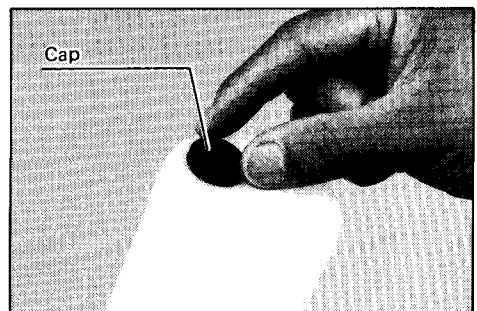


CAUTION :

Before inserting the battery cartridge into the tool, always check to see that the trigger switch actuates properly and returns to the "OFF" position when released.

Water supply

Remove the cap on the tank and fill through the hole. Recap the tank. Be sure that the water cock is turned off when filling the tank with water.

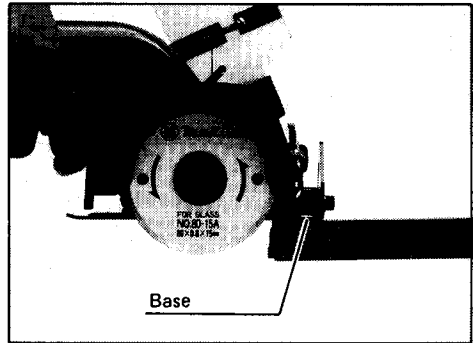


CAUTION :

When filling the tank with water, be careful not to let the tool get wet.

Operation

Hold the tool firmly. Set the base plate on the workpiece to be cut without the wheel making any contact. Then turn the tool on and wait until the wheel attains full speed. Feed water to the wheel by adjusting the water cock to obtain a gentle flow of water. Move the tool forward over the workpiece surface, keeping it flat and advancing smoothly until the cutting is completed. Keep your cutting line straight and your speed of advance uniform.



For fine, clean cuts, cut slowly. (When cutting glass plate 5 mm (3/16") thick, cut at about 250 mm/min (9-7/8"/min). When cutting tile 10 mm (3/8") thick, cut at about 300 mm/min (11-13/16"/min).) Also slow down as you complete a cut to avoid breaking or cracking the workpiece being cut.

CAUTION:

- Be sure to hold the workpiece firmly down on a stable bench or table during operation.
- Do not twist or force the tool in the cut, or the motor may be overloaded or the workpiece may break.
- Do not use the tool with the wheel in an upward or sideways position.
- When cutting glass plate, it is recommended to attach a rubber plate (optional accessory) on the base of the tool to prevent the workpiece surface from being scratched.
- The wheel for Model 4190D/DW is a wet-type wheel for glass and tile applications. Be sure to feed water to the wheel during operation.
- If the cutting action of the wheel begins to diminish, dress the cutting edge of the wheel using an old discarded coarse grit bench grinder wheel or concrete block. Dress by pressing lightly on the outer edge of the wheel.

CAUTION:

If the tool is operated continuously until the battery cartridge has discharged, allow the tool to rest for 15 minutes before proceeding with a fresh battery.

MAINTENANCE

CAUTION:

Always be sure that the charger is unplugged and the battery cartridge is removed before attempting to perform inspection or maintenance.

After use

Brush off accumulation of dust on the base.

To maintain product SAFETY and RELIABILITY, repairs, maintenance or adjustment should be performed by Makita Authorized or Factory Service Centers, always using Makita replacement parts.

OPTIONAL ACCESSORIES

The accessories listed in this manual are available at an extra cost from your Makita distributor or Makita factory service center. Service centers are listed on the warranty card packed with your tool.

CAUTION:

These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. The accessories or attachments should be used only in the proper and intended manner.

• Diamond wheel



Part No.	Diameter (mm)	Hole diameter (mm)	Blade type	Use
724950-8D	85 (3-3/8")	15 (19/32")	Wet or dry	General purpose
724950-8C	85 (3-3/8")	15 (19/32")	Wet	For glass cutting

• Hex wrench 4

Part No. 783202-0



• Rubber plate

Part No. 423075-6

• Fast charger

Model DC9700A Fast Charger

Part No. 113103-2



• Charger 12V for car

Model DC9112

Part No. 113110-5



• Makita Battery cartridge 9000 (9.6 V)

1-hour fast charge nickel cadmium
battery

Part No. 632007-4



• Battery holster

Holds with extra battery

Part No. 823033-3C

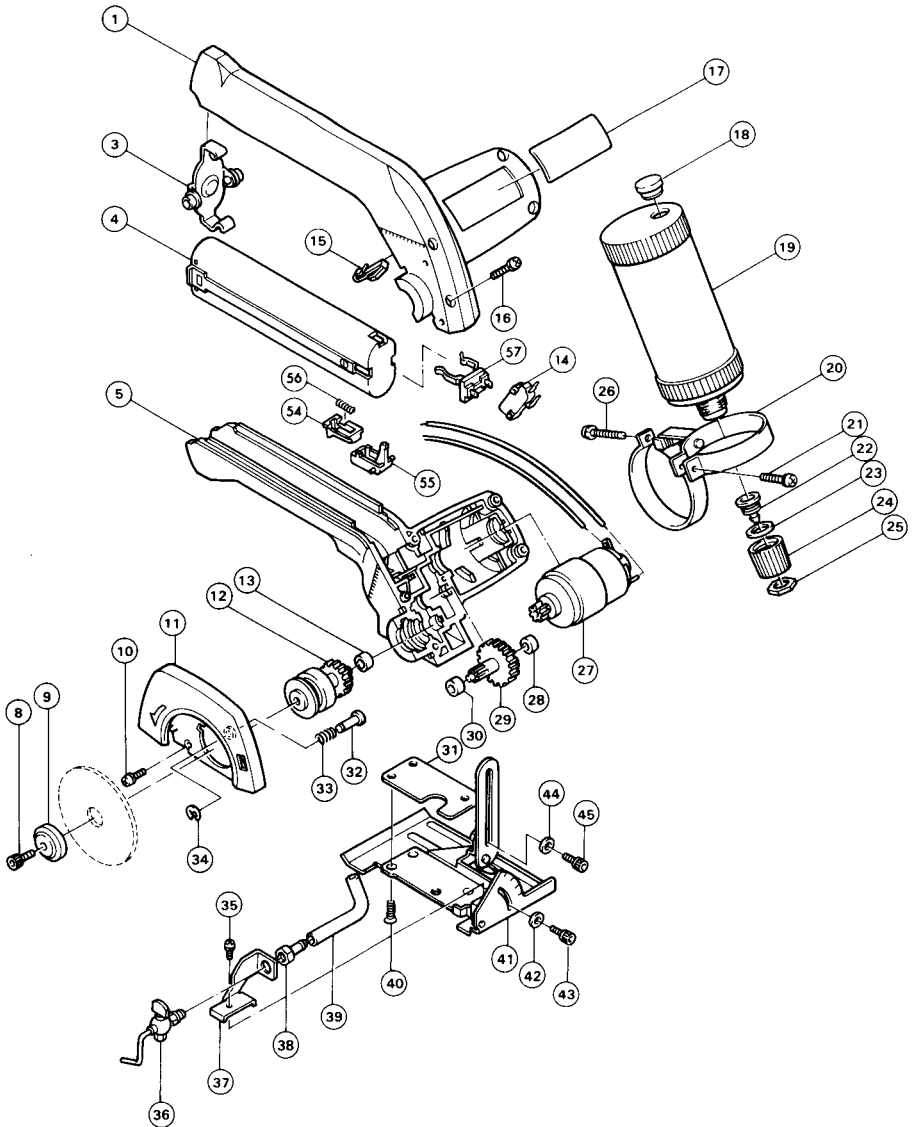


• Battery cover

Part No. 414938-7



85 mm (3-3/8") CORDLESS CUTTER Model 4190D



Note: The switch and other part configurations may differ from country to country.

ITEM NO.	NO. USED	DESCRIPTION	ITEM NO.	NO. USED	DESCRIPTION
MACHINE			MACHINE		
1	1	Housing Set (With Item 5)	27	1	DC Motor 9.6 V
3	1	Set Plate	28	1	Plane Bearing 4
4	1	Battery 9000	29	1	Gear Complete 11 - 67
5	1	Housing Set (With Item 1)	30	1	Plane Bearing 4
8	1	Hex. Socket Head Bolt M5x12	31	1	Packing
9	1	Outer Flange 28	32	1	Pin 5
10	3	Pan Head Screw M4x14 (With Washer)	33	1	Compression Spring 6
11	1	Blade Case	34	1	Stop Ring E - 4
12	1	Gear	35	1	Pan Head Screw M4x6 (With Washer)
13	1	Plane Bearing 5	36	1	Cock
14	1	Switch	37	1	Cock Holder
15	1	Leaf Spring	38	1	Nut
16	5	Pan Head Screw M4x25 (With Washer)	39	1	Vinyl Tube 5
17	1	Name Plate	40	3	Countersunk Head Screw M5x16
18	1	Cap	41	1	Base
19	1	Tank	42	1	Flat Washer 5
20	1	Tank Holder	43	1	Hex. Socket Head Bolt M5x10
21	1	Pan Head Screw M4x25 (With Washer)	44	1	Flat Washer 5
22	1	Metallic Cap	45	1	Hex. Socket Head Bolt M5x10
23	1	Rubber Washer 12	54	1	Lock-Off Lever
24	1	Cap	55	1	Switch Lever
25	1	Hex. Nut M12 - 14	56	1	Compression Spring 3
26	1	Pan Head Screw M4x25 (With Washer)	57	1	Battery Holder

Note: The switch and other part specifications may differ from country to country.

MAKITA LIMITED ONE YEAR WARRANTY

Warranty Policy

Every Makita tool is thoroughly inspected and tested before leaving the factory. It is warranted to be free of defects from workmanship and materials for the period of ONE YEAR from the date of original purchase. Should any trouble develop during this one-year period, return the COMPLETE tool, freight prepaid, to one of Makita's Factory or Authorized Service Centers. If inspection shows the trouble is caused by defective workmanship or material, Makita will repair (or at our option, replace) without charge.

This Warranty does not apply where:

- repairs have been made or attempted by others;
- repairs are required because of normal wear and tear;
- The tool has been abused, misused or improperly maintained;
- alterations have been made to the tool.

IN NO EVENT SHALL MAKITA BE LIABLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES FROM THE SALE OR USE OF THE PRODUCT. THIS DISCLAIMER APPLIES BOTH DURING AND AFTER THE TERM OF THIS WARRANTY.

MAKITA DISCLAIMS LIABILITY FOR ANY IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF "MERCHANTABILITY" AND "FITNESS FOR A SPECIFIC PURPOSE," AFTER THE ONE-YEAR TERM OF THIS WARRANTY.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

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